

CLAIMS

1 1. Electrohydraulic servo door drive for operating a door, a window,
2 etc., with a hold-open function, where, to implement the hold-open function, a valve is
3 provided in the hydraulic circuit, characterized in that the valve is designed as a
4 hydraulically controlled hold-open valve (20).

1 2. Electrohydraulic servo door drive according to Claim 1, characterized in
2 that the hold-open valve (20) consists of a 2/2-way directional control valve.

1 3. Electrohydraulic servo door drive according to Claim 1, characterized in
2 that the 2/2-way directional control valve is designed as a lockable nonreturn valve.

1 4. Electrohydraulic servo door drive according to Claim 1, characterized in
2 that the 2/2-way directional control valve is designed as a slide valve.

1 5. Electrohydraulic servo door drive according to one of the preceding
2 claims, characterized in that the hold-open valve (20) has a control piston (22) and a
3 nonreturn valve (23).

1 6. Electrohydraulic servo door drive according to one of the preceding
2 claims, characterized in that either the nonreturn valve (23) or the control valve (22) of
3 the hold-open valve (20) or both are spring-loaded by one or more spring elements (26,
4 27).

1 7. Electrohydraulic servo door drive according to one of the preceding
2 claims, characterized in that the pressure in the piston space (1) of the servo door drive
3 is higher than the control pressure in the hold-open valve (20).

1 8. Electrohydraulic servo door drive according to one of the preceding
2 claims, characterized in that the effective piston surface of the control piston (22) is
3 larger than the sealing surface of the 2/2-way directional control valve.

1 9. Electrohydraulic servo door drive according to one of the preceding
2 claims, characterized in that a motor (7), designed as a DC motor, as an electronically
3 commutated motor, or as a speed-controlled AC or 3-phase motor, is provided in the
4 hydraulic circuit to drive a pump (6).

1 10. Electrohydraulic servo door drive according to one of the preceding
2 claims, characterized in that the forward flow and the return flow of the hydraulic circuit
3 are separated from each other.

1 11. Electrohydraulic servo door drive according to one of the preceding
2 claims, characterized in that the nonreturn valve (23) is integrated into the control piston
3 (22) of the hold-open valve (20).

1 12. Electrohydraulic servo door drive according to one of the preceding
2 claims, characterized in that the nonreturn valve (23) is provided in a bypass (50)
3 around the 2/2-way directional control valve.

1 13. Electrohydraulic servo door drive according to one of the preceding
2 claims, characterized in that throttle valves (16, 17) are provided in the hydraulic circuit
3 to control the opening and/or closing movement.

1 14. Electrohydraulic servo door drive according to one of the preceding
2 claims, characterized in that the hold-open valve (20) can be switched and/or controlled
3 via the pressure of the pump (7).

1 15. Electrohydraulic servo door drive according to one of the preceding
2 claims, characterized in that a valve (28) is installed parallel to the hold-open valve (20)
3 in such a way that the leakage flow at the control piston can be adjusted effectively in
4 order to control the switching speed of the hold-open valve (20).

1 16. Electrohydraulic servo door drive according to one of the preceding
2 claims, characterized in that the valve (28) has a closing body (29) acting on a spring
3 (31), so that the valve (28) closes as a function of pressure and thus reduces the
4 leakage flow which occurs during the opening process.

1 17. Electrohydraulic servo door drive according to one of the preceding
2 claims, characterized in that a valve (28) is provided between a hydraulic line (41)
3 leading from the pump (6) and a hydraulic line (46) leading to the tank space (8).

1 18. Electrohydraulic servo door drive according to one of the preceding
2 claims, characterized in that an auxiliary device for performing a support function during
3 the actuation of the door, window, etc., is provided.

1 19. Electrohydraulic servo door drive according to one of the preceding
2 claims, characterized in that the auxiliary device has a motor amplifier (51) connected to
3 the motor (7), especially an amplifier which operates according to the PWM principle.

1 20. Electrohydraulic servo door drive according to one of the preceding
2 claims, characterized in that the motor amplifier (51) is connected to an controller and
3 current regulator (52).

1 21. Electrohydraulic servo door drive according to one of the preceding
2 claims, characterized in that the motor amplifier (51) and the controller and current
3 regulator (52) are each connected to a voltage supply (55).

1 22. Electrohydraulic servo door drive according to one of the preceding
2 claims, characterized in that the controller and current regulator (52) is connected to a
3 position sensor (53), which cooperates with the pinion (5).

1 23. Electrohydraulic servo door drive according to one of the preceding
2 claims, characterized in that the controller and current regulator (52) has a D/A
3 converter (54).